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DOCKET NO. D-1983-015 CP-4

DELAWARE RIVER BASIN COMMISSION

County of Chester

**Pocopson Home and Prison Wastewater Treatment Plant and Spray Irrigation Facility
Pocopson Township, Chester County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an application submitted to the Delaware River Basin Commission (DRBC or Commission) by the County of Chester on March 19, 2012 (Application) for renewal and increase in permitted flow of an existing wastewater treatment plant (WWTP) and spray irrigation facility. The increase in flow was approved by the Pennsylvania Department of Environmental Protection (PADEP) by issuance of Water Quality Management (Part II) Permit No. 1583402-A4 on October 6, 2011.

The Application was reviewed for continuation of the project in the Comprehensive Plan and approval under Section 3.8 of the *Delaware River Basin Compact*. The Chester County Planning Commission has been notified of pending action. A public hearing on this project was held by the DRBC on September 12, 2012.

A. DESCRIPTION

1. Purpose. The purpose of this project is to renew the approval of the existing Pocopson Home and Prison (PHP) WWTP, consisting of a treatment lagoon and spray irrigation facilities. This docket also approves the increase in annual average design flow of the WWTP from 0.13676 million gallons per day (mgd) to 0.2 mgd.

2. Location. The PHP WWTP is located approximately one-half mile north of Route 52 in Pocopson Township, Chester County, Pennsylvania. The project will continue to discharge effluent to 34.1 acres of spray irrigation fields located in the Pocopson Creek Watershed as follows:

SPRAY FIELD NO.	LATITUDE (N)	LONGITUDE (W)
Spray Field 1	39° 54' 45"	75° 39' 23"
Spray Field 2	39° 54' 38"	75° 39' 33"
Spray Field 3	39° 54' 23"	75° 39' 23"

3. **Area Served.** The project will continue to serve three County institutions: the Pocopson Home, Chester County Prison, and Youth Detention Center.

For the purpose of defining the Area Served, sections B (Type of Discharge) and D (Service Area) of the docket holder's Application are incorporated herein by reference, to the extent consistent with all other conditions contained in the DECISION Section of this docket.

4. **Physical features.**

a. **Design criteria.** The existing PHP WWTP is designed to treat an average flow of 0.2 mgd using lagoon treatment and spray irrigation discharge. The previous PADEP Part II Permit No. 1583402-A4, issued on July 18, 2007 restricted the annual average design flow to 0.13676 mgd until additional storage was provided in the primary storage lagoon. DRBC docket No. D-83-15 CP-3 also limited the average annual design flow to 0.13676 mgd. The docket holder has provided the additional storage by constructing a freeboard wall on the primary storage lagoon. The WWTP continues to have a hydraulic design capacity of 0.73 mgd.

b. **Facilities.** Sewage flows to the facility by gravity from the County Prison and is pumped from the Pocopson Home and Youth Detention Center. The sewage receives preliminary treatment in the Screen Building that houses a comminutor and screening system. The effluent is then pumped to the 8.5-million gallon primary treatment lagoon. The primary treatment lagoon is a three stage aerated lagoon with an 80-day retention time. From the treatment lagoon, the effluent flows by gravity to a 25-million gallon storage lagoon where it is stored until conditions are met for disposal.

When proper conditions for spraying exist, water is pumped from the storage lagoon to the treatment building for further treatment. In the treatment building, water is injected with aluminum sulfate solution before entering a 6,000-gallon capacity flocculation tank. From the flocculation tank, water flows through a cloth media filter system to remove suspended solids. The suspended solids are wasted to the sludge settling pits and the filtered water is injected with a 15 percent sodium hypochlorite solution before entering a 20,000-gallon baffled four-cell chlorine retention basin for disinfection. The treated water is then pumped to the spray fields for disposal.

PADEP requires that spray field vegetation and soils must be managed in accordance with the submitted crop management plan and soil nutrient analyses and in accordance with the Penn State Cooperative Extension Agronomy Facts Bulletin No. 25, specific to Orchard grass.

PADEP requires ongoing groundwater monitoring and reporting. Groundwater samples are collected on a quarterly basis from a total of nine monitoring wells installed near the spray irrigation fields.

The project facilities are outside the 100-year flood zone.

Wasted sludge will continue to be hauled off-site by a licensed hauler for disposal at a State-approved facility.

Spray field grass cuttings are taken by local farmers.

c. **Water withdrawals.** The potable water supply in the project service area is provided by Aqua Pennsylvania via interconnection with the Chester Water Authority.

d. **Water Quality Management (Part II) Permit / DRBC Docket.** The PADEP issued a revised Part II Permit No. 1583402-A4 for the project on October 6, 2011, which includes final effluent limitations for the project discharge of 0.2 mgd to the spray irrigation disposal facility. The following average monthly effluent limits are among those listed in the PADEP WQM permit and meet or are more stringent than the effluent requirements of the DRBC.

EFFLUENT TABLE A-1: DRBC Parameters Included in Part II Permit.

Spray Irrigation Effluent		
PARAMETER	LIMIT	MONITORING
CBOD (5-Day at 20° C)	25 mg/l	As required in the WQM permit
Total Suspended Solids	30 mg/l	As required in the WQM permit
Total Nitrogen*	22 mg/l	As required in the WQM permit
Fecal Coliform	200 col./100 ml as geometric average	As required in the WQM permit
pH (Standard Units)	6 to 9 at all times	As required in the WQM permit

* DRBC Water Quality Regulations (WQR) include basin-wide ammonia-nitrogen effluent limits. Meeting the total nitrogen limit of 22 mg/l satisfies the DRBC criteria for ammonia-nitrogen.

EFFLUENT TABLE A-2: DRBC Parameters Not Included in Part II Permit.

Outfall 001 (UNT Green Creek)		
PARAMETER	LIMIT	MONITORING
Total Dissolved Solids*	Monitor and Report Only	One Per Quarter

* See Condition II.o.

e. **Cost.** There are no construction costs related to this docket approval.

f. **Relationship to the Comprehensive Plan.** The original WWTP was included in the Comprehensive Plan (CP) by Docket No. D-69-209 CP on January 28, 1970. That plant including its associated stream discharge was replaced by the expanded WWTP and construction of spray fields, which were added to the CP via Docket Nos. D-83-15 CP, D-83-15 CP-2, and D-83-15 CP-3.

B. FINDINGS

The purpose of this project is to renew the approval of the existing PHP WWTP consisting of a treatment lagoon and spray irrigation facilities. This docket also approves an increase in permitted average daily flows from 0.13676 mgd to 0.2 mgd.

Docket D-83-15 CP-3 approved the expansion of treatment capacity at the PHP WWTP from an average of 0.105 mgd to 0.13676 mgd. The expansion included upgrades to the Pocopson Home pump station, new screen and blower buildings, a new influent pump station, a new 8.4 million gallon aerated treatment lagoon, expansion of the existing storage lagoon by

raising the concrete freeboard walls, conversion of the existing aerated treatment lagoon to secondary storage, and the construction of 3 additional spray fields. Although the WWTP and spray fields had been designed for an ultimate average hydraulic loading capacity of 0.2 mgd, the previous PADEP Part II Permit did not authorize the construction of the freeboard wall until a PADEP Dam Permit had been issued and restricted flows to the treatment plant to 0.13676 mgd.

On June 19, 2008, PADEP issued Dam Permit No. D15-400 allowing the construction of the freeboard wall. The modifications and expansion of the treatment facility, including the construction of the freeboard wall was completed on August 25, 2009. PADEP Part II Permit No. 1583402-A4, issued on October 6, 2011, approved the increase in flow from 0.13676 mgd to 0.2 mgd.

The docket holder submitted an application for renewal of the PHP WWTP discharge on March 19, 2012. The Commission approved Docket D-83-15 CP-3 on December 12, 2007. The docket holder did not submit an application for renewal of the docket prior to Docket No. D-83-15 CP-3 expiring on December 12, 2011.

The limits in the Part II Permit are in compliance with Commission effluent quality requirements, where applicable.

The project is designed to produce a discharge meeting the effluent requirements as set forth in the *Water Quality Regulations* of the DRBC.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

C. DECISION

- I. Effective on the approval date for Docket No. D-1983-15 CP-4 below:
 - a. The project described in Docket No. D-83-15 CP-3 is removed from the Comprehensive Plan to the extent that they are not included in Docket No. D-1983-15 CP-4
 - b. Docket No. D-83-15 CP-3 is terminated and replaced by Docket No. D-1983-15 CP-4.
 - c. The project and the appurtenant facilities described in Section A “Physical Features” of this docket shall be added to the Comprehensive Plan.
- II. The project and appurtenant facilities as described in Section A “Physical features” of this docket are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by PADEP in its Part II Permit, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission's.

b. The facility and operational records shall be available at all times for inspection by the DRBC.

c. The facility shall be operated at all times to comply with the requirements of the *Water Quality Regulations* of the DRBC.

d. The docket holder shall comply with the requirements contained in the Effluent Table in Section A.4.d. of this docket. The docket holder shall submit the required monitoring results directly to the DRBC Project Review Section. The monitoring results shall be submitted annually, absent any observed limit violations, by January 31. If a DRBC effluent limit is violated, the docket holder shall submit the result(s) to the DRBC within 30 days of the violation(s) and provide a written explanation that states the action(s) the docket holder has taken to correct the violation(s) and protect against any future violations.

e. Except as otherwise authorized by this docket, if the docket holder seeks relief from any limitation based upon a DRBC water quality standard or minimum treatment requirement, the docket holder shall apply for approval from the Executive Director or for a docket revision in accordance with Section 3.8 of the *Compact* and the *Rules of Practice and Procedure*.

f. If at any time the receiving treatment plant proves unable to produce an effluent that is consistent with the requirements of this docket approval, no further connections shall be permitted until the deficiency is remedied.

g. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

h. The docket holder is permitted to treat and discharge wastewaters as set forth in the Area Served Section of this docket, which incorporates by reference Sections B (Type of Discharge) and D (Service Area) of the docket holder's Application to the extent consistent with all other conditions of this DECISION Section.

i. The docket holder shall make wastewater discharge in such a manner as to avoid injury or damage to fish or wildlife and shall avoid any injury to public or private property.

j. No sewer service connections shall be made to newly constructed premises with plumbing fixtures and fittings that do not comply with water conservation performance standards contained in Resolution No. 88-2 (Revision 2).

k. Nothing in this docket approval shall be construed as limiting the authority of DRBC to adopt and apply charges or other fees to this discharge or project.

l. The issuance of this docket approval shall not create any private or proprietary rights in the waters of the Basin, and the Commission reserves the right to amend, suspend or rescind the docket for cause, in order to ensure proper control, use and management of the water resources of the Basin.

m. Unless an extension is requested and approved by the Commission in advance, in accordance with paragraph 11 of the Commission's Project Review Fee schedule (Resolution No. 2009-2), the docket holder is responsible for timely submittal of a docket renewal application on the appropriate DRBC application form at least 12 months in advance of the docket expiration date set forth below. The docket holder will be subject to late charges in the event of untimely submittal of its renewal application, whether or not DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below (or the later date established by an extension that has been timely requested and approved), the terms and conditions of the current docket will remain fully effective and enforceable against the docket holder pending the grant or denial of the application for docket approval.

n. The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director's judgment such modification or suspension is required to protect the water resources of the Basin.

o. The docket holder may request of the Executive Director in writing the substitution of specific conductance for TDS. The request should include information that supports the effluent specific correlation between TDS and specific conductance. Upon review, the Executive Director may modify the docket to allow the substitution of specific conductance for TDS monitoring.

p. Any person who objects to a docket decision by the Commission may request a hearing in accordance with Article 6 of the Rules of Practice and Procedure. In accordance with Section 15.1(p) of the Delaware River Basin Compact, cases and controversies arising under the Compact are reviewable in the United States district courts.

q. The docket holder is prohibited from treating/pre-treating any hydraulic fracturing wastewater from sources in or out of the Basin at this time. Should the docket holder wish to treat/pre-treat hydraulic fracturing wastewater in the future, the docket holder will need to first apply to the Commission to renew this docket and be issued a revised docket allowing such treatment and an expanded service area. Failure to obtain this approval prior to treatment/pre-treatment will result in action by the Commission.

BY THE COMMISSION

DATE APPROVED:

EXPIRATION DATE: September 12, 2017